

Conference Abstract

# History Extended: Migration of Systema Dipterorum into TaxonWorks

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## Abstract

Now 40-year old, Systema Dipterorum was originally created in a FileMaker™ database by F.C. Thompson and is currently maintained by N.L. Evenhuis and T. Pape (Evenhuis and Pape 2024a). Recent conversations as to its future led to an effort to transition Systema Dipterorum into TaxonWorks. A web-based platform tailored to the requirements of biodiversity-informatics scientists, TaxonWorks meets the evolving needs of Systema Dipterorum. TaxonWorks provides tools designed to facilitate data migration, management, validation, and packaging for exports, such as Darwin Core-Archives (DwC-A) and Catalogue of Life Data Package (CoL-DP) formats.

While TaxonWorks offers batch upload functionality, the intricate nature of the Systema Dipterorum database necessitated specialized handling, i.e., a custom migration script. A TaxonWorks version of Systema Dipterorum is now accessible for preview and validation. This preview is particularly valuable for nomenclature validation, as TaxonWorks includes many tools ensuring compliance with the rules of Zoological Nomenclature (International Commission on Zoological Nomenclature 1999). Additionally, this preview version now directly feeds the pipeline serving Systema Dipterorum to the Catalogue of Life.

By migrating Systema Dipterorum into TaxonWorks, a wide range of utilities expanding the decades of effort behind the data are unlocked. TaxonWorks enables the creation of paper-style catalogs and the sharing of data via its public interface, [TaxonPages](#). A [test version of Systema Dipterorum](#) stored in TaxonWorks and rendered with TaxonPages is now available on-line (Evenhuis and Pape 2024b). The data are also accessible via a JavaScript Object Notation (JSON) API, enabling computing (e.g., scripted synonymy queries) against the TaxonWorks dataset. Complexity and diversity of the data are illustrated in Fig. 1. While many technical hurdles are resolved, major challenges remain in building a new community around Systema Dipterorum, one that will collectively take over the efforts of the few curators who have worked for so long on this broadly used resource.



Figure 1.  
Types and diversity of data in the Systema Dipterorum database as converted into TaxonWorks

Keywords

Diptera, database, curation, validation, project, community

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## Conflicts of interest

The authors have declared that no competing interests exist.

## References

- Evenhuis NL, Pape T (2024a) Systema Dipterorum. Version 5.3. <http://diptera.org/>. Accessed on: 2024-8-05.
- Evenhuis NL, Pape T (2024b) TaxonPages: Systema Dipterorum - Test version. <https://sfg-taxonpages.github.io/sysdipterorum/#/>. Accessed on: 2024-8-05.
- International Commission on Zoological Nomenclature (1999) International Code of Zoological Nomenclature. 4th ed. The International Trust for Zoological Nomenclature, London, XXIX + 306 pp. URL: <https://www.iczn.org/the-code/the-code-online/>